

## ***One County's GIS Success Story: Conway County***

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### **PROBLEM**

Once upon a time, in rural county named Conway, officials decided to develop a geographic information system (GIS) to benefit utilities such as water and sewer systems. If you are unfamiliar with GIS, it is all of the factors (software, technology, resources, education, people, etc.) that come together, allowing decision-makers to explore alternatives concerning land and mapping data based on accurate information. Conway County realized that GIS could put their water and sewer systems on the map; this would come in handy in the future when any public works employees retire (often, only one employee knows which sewer lines intersect certain streets). Thus, with a database, the information will be kept in one place, which can be accessible to future employees.

Conway County Judge Jimmy Hart had no way to accurately document road maintenance. With a database, he would be able to monitor repairs, maintenance, culverts, materials, etc. on their county roads. County officials would also be able to keep track of new roads being developed.

County E-911 Coordinator Misty Sutton did not possess an accurate digital road map for the county. As Phase I and II for E-911 wireless calls developed, the county realized that it needed an accurate map in order for first responders to be able to accurately perform their duties. Phase I and II rely on latitude and longitude coordinates of a location – if the digital road map of the county is not precise, there can be problems for first responders trying to find correct addresses.

### **SOLUTION**

Conway County realized that it needed a centerline (road) database in order to aid E-911, utilities, county road management, future voting districts, and overall, a growing county. As communities grow, so do the amount of roads, causing the data to be either inaccurate or non-existent. It was difficult for Conway County to keep up with all of these new roads by hand-drawing them on the maps that it had at that time. Accuracy was becoming more difficult to maintain, due to all of the different factors involved. In order to develop an accurate road database, Conway County provided a contractor with the Arkansas Centerline File and Global Positioning System Standards, which saved the county money.

Arkansas One Call contacted Conway County officials, encouraging the county and stressing the benefits of using geographic information systems (GIS) to aid in utilities management. The support from Arkansas One Call was enough to interest the mayors of Conway County, due to their desire for documentation and mapping of sewer and water systems. This tool (GIS) would prove useful to future county employees, giving them the knowledge of the exact locations where the utility lines run through the county and intersect with other lines, roads, streams, etc.

Since Conway County desired and needed a well-developed GIS, it realized that accurate street and road data needed to be gathered for the county. The

intergovernmental council, consisting of the county judge and mayors, agreed that creating a centerline (road) file was the first task. The county followed the Arkansas Centerline File (ACF) Standards, which saved money. Misty Sutton, Conway County E-911 Coordinator, states, "It was a tremendous help having state standards to follow. Being a small county, with a limited budget, we could not hire a GIS professional. Having the standards reduced the cost of the project and made it easier for us to bid out." The county received professional assistance from the Arkansas Geographic Information Office concerning the ACF standards, as well as general GIS principles.

### ***How Conway County used GIS resources in Arkansas***

Conway County now has an accurate centerline database, but is still working on additional GIS data. The county has used GeoStor ([www.gis.state.ar.us](http://www.gis.state.ar.us)), the spatial data warehouse for Arkansas, to download data such as section lines, townships, city limits, bodies of water, fire and police departments, etc. In addition, the county has created its own data layers using the help of the University of Arkansas Community College at Morrilton, the Morrilton High School EAST Program (<http://www.eastproject.org/>), and Arkansas Tech University's Emergency Administration and Management Department. These developed or in-progress layers consist of fire hydrants, sewer systems, water lines, voting districts, etc. GeoStor is the warehouse that maintains spatial data for Arkansas and is accessible to the public for no subscription fee.

### ***A testament to all***

More and more community members and organizations continue to contribute ideas and resources to the project. Misty Sutton states, "I think that our county is a good example of the fact that GIS can be within reach of small counties with limited budgets. I would recommend this [centerline] project to other counties/cities. This is the information age; GIS formulates your information into something you can see and use. GIS is not something for the future – we use it everyday."

### ***For more information***

If you would like to know more about the Arkansas Centerline Files Project, please visit [http://www.gis.state.ar.us/AGIO/ACF\\_program.asp](http://www.gis.state.ar.us/AGIO/ACF_program.asp). You may also contact Learon Dalby, GIS Program Manager, at the Arkansas Geographic Information Office, via email [learon.dalby@mail.state.ar.us](mailto:learon.dalby@mail.state.ar.us) or by phone at 501-682-2929.